

## Education

E.d.D. **Instructional Technology**. University of Wyoming, Laramie, WY. In progress – coursework complete with anticipated defense in spring 2012

M.S. **Molecular Biology**. University of Wyoming, Laramie, WY. 2001. Thesis: Conformational Changes in Pediocin AcH upon Vesicle Binding and Approximation of the Membrane-Bound Structure in Detergent Micelles

B.S. **Chemistry**. University of Denver, Denver, CO. 1998

## Teaching Experience

- **MOLB/MICR 2021 [2210]: General Microbiology Laboratory** Fall 01-Present  
([http://www.uwyo.edu/molb2210\\_lab/](http://www.uwyo.edu/molb2210_lab/))
- **MOLB 4850: Undergraduate Teaching Internship** Fall 01-Present
- **MOLB/MICR 2240: Medical Microbiology Laboratory** Spring 02 – Present  
([http://www.uwyo.edu/molb2210\\_lab/](http://www.uwyo.edu/molb2210_lab/))
- **MOLB/MICR 2021 [2210]: General Microbiology** Spring 03 - Present  
([http://www.uwyo.edu/molb2210\\_lect/](http://www.uwyo.edu/molb2210_lect/))
- **MOLB/CHEM 3610: Principles of Biochemistry** Summer 05 – Present
- **MOLB 4100 [3980]: Clinical Biochemistry Laboratory** Spring 01-02
- **CHEM 1020: General Chemistry I** Fall 01-02
- **LSCI 0521/0511: Chemistry** Summer 00-02  
Upward Bound and Math Science Initiative High School residential summer program
- **MOLB 5160: RNA Biochemistry Laboratory** Fall 00  
Graduate teaching assistant
- **MOLB 5230: Nucleic Acids Laboratory** Spring 00  
Graduate teaching assistant
- **CHEM 2011: Chemistry of the Elements** Spring 97  
Undergraduate teaching assistant and tutor

## Publications

Watson, R., & Boggs, C. The Virtual Classroom: Student and Instructor Perceptions of Vodcast Lectures in a General Microbiology Classroom [Abstract]. In: Sixteenth Annual American Society for Microbiology Conference for Undergraduate Educators; 2009 May 28-31; Ft. Collins, CO. Washington, DC; 2009. p.56. Available: <http://www.asmcue.org/MicroBrew-Abstracts.shtml>

- Watson, R., & Boggs, C. (2008). Vodcast Venture: How Formative Evaluation of Vodcasting in a Traditional On-Campus Microbiology Class Led to the Development of a Fully Vodcasted Online Biochemistry Course. *Proceedings of World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education 2008*. (pp. 3309-3316) Chesapeake, VA: AACE. [Online]. Available: <http://www.editlib.org/p/30137>
- Hughes A., Boggs, C. & Watson, R. (2008). The Online Dilemma: Student Perceptions of Online Supplemental Instruction for General Microbiology. *Proceedings of World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education 2008*. (pp. 915-918) Chesapeake, VA: AACE. [Online]. Available: <http://www.editlib.org/p/29723>
- Watson, R. M. (2008) **A Brand of Excellence: Reflections on Teaching and Learning**. In J.K. Wangberg (Ed.), *Listen for the Dune Buggies* (pp. 111-123). Laramie, Wyoming: University of Wyoming.
- Watson, R., & Boggs, C. (2007). The Virtual Classroom: Student Perceptions of Podcast Lectures in a General Microbiology Classroom. *Proceedings of World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education 2007*. (pp. 2170-2174). Chesapeake, VA: AACE. [Online]. Available: <http://www.editlib.org/index.cfm>
- Watson, R., & Boggs, C. (2003). Warming up the Chill: Integrating Technology into a General Chemistry Course. *World Conference on Educational Multimedia, Hypermedia and Telecommunications 2003*(1), 1881-1882. [Online]. Available: <http://dl.aace.org/13133>
- Watson, R. M. , Woody, R. W., Lewis, R. V., Bohle, D. S., Andreotti, A. H., Ray, B. and Miller, K. W. (2001). Conformational Changes in Pediocin AcH Upon Vesicle Binding, and the Approximation of the Membrane-bound structure in Detergent Micelles. *Biochemistry*, Vol. 40, Number 46, pp. 14037-14046.
- Watson, R. M. (2001). *Conformational Changes in Pediocin AcH Upon Vesicle Binding, and the Approximation of the Membrane-bound structure in Detergent Micelles*. Unpublished Masters Thesis, University of Wyoming,
- Watson, R. M., Ray, B. and Miller, K. W. (2001) in Abstracts: American Society for Microbiology 101 General Meeting pp 6, American Society for Microbiology, Washington, D. C.

## Presentations

- **Mobile Micro: The use of Mobile Devices in a General Microbiology Course** November 2010  
La Jolla, CA

Western Interstate Commission for Higher Education (WICHE)  
Cooperative for Educational Technologies (WCET) conference
- **Concerning Little Known Students: Discovering those Hidden from our Sight.** October 2010  
Laramie, WY

Fall 2010 Rocky Mountain Branch of the American Society for  
Microbiology Regional Meeting

- **Microbes: Critters and Communities in Us and Around Us** September 2010  
 Guest lecture for the AGRI 1001 Intellectual Communities Course  
 (the anchor course for the “Critters and Community” Freshman  
 Interest Group) Laramie, WY
- **What Should I Expect in College?** August 2010  
 Faculty Sneak Peek Session Leader for Incoming Freshman Laramie, WY
- **A Whole New World for Teaching and Learning: Exploring Educational (Teaching and Research) Opportunities in *Second Life*** May 2010  
 Distance Learning Guild (Outreach Credit Programs) Laramie, WY
- **“I” Found Paul in the Social Sciences: A Narrative of the Experience of a Gay Student who Left the Hard Sciences to Pursue a Career in Social Science** April 2010  
 2010 Shepard Symposium for Social Justice Laramie, WY
- **Cell Phones in the Classroom** October 2009  
 E-volution: Teaching and Learning with Technology Laramie, WY  
 Available: <http://www.uwyo.edu/techforum/Elluminate.htm>
- **What are Faculty Doing with Technology?** October 2009  
 E-volution: Teaching and Learning with Technology, Faculty Panel Laramie, WY  
 Available: <http://www.uwyo.edu/techforum/Elluminate.htm>
- **Microbes: Critters and Communities in Us and Around Us** October 2009  
 Guest lecture for the AGRI 1001 Intellectual Communities Course Laramie, WY  
 (the anchor course for the “Critters and Community” Freshman Interest Group)
- **What Should I Expect in College?** August 2009  
 Faculty Sneak Peek Session Leader for Incoming Freshman Laramie, WY
- **The Virtual Classroom: Student and Instructor Perceptions of Vodcast Lectures in a General Microbiology Classroom** May 2009  
 American Society for Microbiology Conference for Undergraduate Educators, Microbrew Session Ft. Collins, CO
- **Commencement Address** May 2009  
 University of Wyoming, College of Agriculture Laramie, WY
- **Vodcast Venture: How Formative Evaluation of Vodcasting in a Traditional On-Campus Microbiology Class Led to the Development of a Fully Vodcasted Online Biochemistry Course** November 2008  
 E-Learn World Conference on E-learning in Corporate, Government, Healthcare and Higher Education Las Vegas, NV

- **The Online Dilemma: Student Perceptions of Online Supplemental Instruction for General Microbiology** November 2008  
 Las Vegas, NV  
 E-Learn World Conference on E-learning in Corporate, Government, Healthcare and Higher Education
- **Panel on *A Brand of Excellence: Reflections on Teaching and Learning*** October, 2008  
 Laramie, WY  
 Ellbogen Center for Teaching and Learning Fall Forum on Learning and Assessment
- **Web 2.0 for Teaching** May 2008  
 Laramie, WY  
 Ellbogen Center for Teaching and Learning ICS Workshop
- **The Virtual Classroom: Student Perceptions of Podcast Lectures in a General Microbiology Classroom** October 2007  
 Quebec City  
 E-Learn World Conference on E-learning in Corporate, Government, Healthcare and Higher Education
- **Warming up the Chill: Integrating Technology into a General Chemistry Course** July 2003  
 Honolulu, HI  
 Ed-Media World Conference
- **Warming up the Chill: Integrating Technology into a General Chemistry Course** May 2003  
 Laramie, WY  
 inVISIBLE college Fourth Annual Meeting and Reunion
- **Book Discussion Leader: Women as Learners by Elisabeth Hayes and Daniele D. Flannery** May 2002  
 Laramie, WY  
 inVISIBLE college Fourth Annual Meeting and Reunion
- **Conformational Changes in Pediocin AcH upon Vesicle Binding and Approximation of the Membrane-Bound Structure in Detergent Micelles** July 2001  
 Laramie, WY  
 Master's Thesis Defense  
 University of Wyoming Department of Molecular Biology
- **Secondary Structure of Pediocin AcH in Membrane Vesicles and Trifluoroethanol** May 2001  
 Orlando, FL  
 American Society for Microbiology 2001 General Meeting
- **Defense of Master's Research Proposal** July 1999  
 Laramie, WY  
 University of Wyoming Department of Molecular Biology
- **Defense of Honor's Thesis** June 1998  
 Denver, CO  
 University of Denver Department of Chemistry

## Grants

- **Ellbogen Center for Teaching and Learning (E-CTL) Assessment Grant** Present  
University of Wyoming
- **Technology Integration Enhancements (TIE) Distance Education Grant** Present  
University of Wyoming (Outreach College)
- **Learning Resource Network (LeaRN) Supplemental Instruction Grant** 2008-Present  
University of Wyoming
- **Ellbogen Center for Teaching and Learning (E-CTL) Plasma Display** March 2010  
University of Wyoming
- **College of Agriculture Teaching Grant** 2007-2008  
University of Wyoming
- **Paul Stock Work Study Grant** 2003-2004  
University of Wyoming (College of Agriculture)
- **inVISIBLE College Cohort Scholarship** 2002-2003  
University of Wyoming (Ellbogen Center for Teaching and Learning)
- **Undergraduate Research Grant** 1997  
Denver University

## Advising

- **Academic Advising** 2005 – present  
University of Wyoming Microbiology and Molecular Biology
- **Nordic Ski Team Faculty Advisor** 2001 – present  
University of Wyoming
- **Senior Honors Thesis Advisor** 2006 – present  
University of Wyoming Honors Program  
Averill, S. (2008) *The Essentials of Omega-3 Fatty Acid Promotion: Fishing for Answer*. Unpublished Honors Thesis.  
Young, K. (2007) *HIV Testing Awareness at the University of Wyoming and the Factors that Keep Students from Being Tested*. Unpublished Honors Thesis

Jordan, N. (2006) *Hope for a Devastating Crisis: The Treatment of HIV and AIDS*. Unpublished Honors Thesis.

- **ΔΔΔ Faculty Advisor** 2006-2007  
University of Wyoming Greek System

## Professional Service

- **Student Transitions and Successes of Enrollment Management** Present  
University of Wyoming LeARN
- **Microbiology Program Steering Committee** Present  
University of Wyoming
- **Distance Education Guild** Present  
University of Wyoming Outreach School
- **Co-director for the microbiology and molecular biology Freshman Interest Group (FIG)** 2009 - present  
University of Wyoming
- **Biology Articulation Committee** 2009 - present  
Wyoming State Wide Directive
- **GLBT/Q/NS Minor Steering Committee** 2008-present  
University of Wyoming
- **AG Ambassador Faculty Selection Committee** April 2009  
University of Wyoming
- **Judge for UW Gold Award** September 2008  
University of Wyoming
- **Self-Designed Major Committee (Forensic Science) for Chandra Thompson** 2007  
University of Wyoming
- **MOLB /MICR Stewardship Committee** 2006  
University of Wyoming
- **Judge for UW Gold Award** September 2005  
University of Wyoming
- **Judge for Homecoming Sing** September 2004  
University of Wyoming Greek System
- **Budget Committee** 2004 - 2005  
University of Wyoming College of Agriculture

## Honors/Awards

- **Mortar Board “Top Prof”** 2010  
University of Wyoming Mortar Board
- **Teaching Award of Merit** 2010  
North American Colleges and Teachers of Agriculture 2010
- **Promoting Intellectual Engagement (PIE) Award** 2010  
University of Wyoming (Ellbogen Center for Teaching and Learning (E-CTL), LeaRN (Learning Resource Network) and Residence Life & Dining)
- **Mortar Board “Top Prof”** 2009  
University of Wyoming Mortar Board
- **Recognition of Excellence in Teaching Non-Honors Courses** 2009  
University of Wyoming Honors Program
- **Promoting Intellectual Engagement (PIE) Award** 2009  
University of Wyoming (Ellbogen Center for Teaching and Learning (E-CTL), LeaRN (Learning Resource Network) and Residence Life & Dining)
- **Mortar Board “Top Prof”** 2008  
University of Wyoming Mortar Board
- **Campus Recreation Outstanding External Contributor** 2008  
University of Wyoming Campus Recreation
- **Division of Student Affairs Outstanding External Contributor Nominee** 2008  
University of Wyoming Division of Student Affairs
- **Division of Student Affairs Outstanding External Contributor Nominee** 2007  
University of Wyoming Division of Student Affairs
- **Lawrence Meeboer Outstanding Teacher** 2007  
University of Wyoming College of Agriculture
- **Mortar Board “Top Prof”** 2007  
University of Wyoming Mortar Board
- **Mortar Board “Tip of the Cap”** 2007  
University of Wyoming Mortar Board
- **Mortar Board “Top Prof”** 2006  
University of Wyoming Mortar Board

- **Lawrence Meeboer Outstanding Teacher Nominee** 2006  
University of Wyoming College of Agriculture
- **Lawrence Meeboer Outstanding Teacher** 2005  
University of Wyoming College of Agriculture
- **RSO Awards of Excellence: Outstanding Advisor** 2005  
University of Wyoming Recognized Student Organizations
- **Mortar Board “Top Prof”** 2004  
University of Wyoming Mortar Board
- **“Toot Your Horn” Award** 2004  
University of Wyoming College of Agriculture
- **Mortar Board “Tip of the Cap”** 2002  
University of Wyoming Mortar Board
- **Completed an M.S. Degree in Molecular Biology with a 4.0 GPA** 2001  
University of Wyoming
- **Summa Kum Laude** 1998  
University of Denver
- **Outstanding Senior Chemistry Major** 1998  
University of Denver
- **Completed a Bachelor’s Degree in Chemistry with a 3.98 GPA** 1998  
University of Denver
- **Phi Beta Kappa** 1996 - present  
Inducted at the University of Denver
- **Dean’s List** 1994-1998  
University of Denver
- **Valedictorian** 1994  
Lake County High School

### **Professional Experience Development**

- **Online Course Design: MOLB/CHEM 3610: Principles of Biochemistry** 2008 - present  
Development of vodcasts and eCampus Course Shell

- **Website Design: MOLB/MICR 2021 [2210]: General Microbiology** 2005 – present  
Development of class website, html and eCompanion Course Shell  
<http://www.uwyo.edu/molb2210>
- **Virtual Online Lab Development: The Virtual Edge** 2004 - present  
Development of online General and Medical Microbiology Labs for use with UW course MOLB 2021 [2210]  
[http://www.uwyo.edu/virtual\\_edge/index.htm](http://www.uwyo.edu/virtual_edge/index.htm)

## Research

- **Integration of Highly Interactive Virtual Environments (HIVEs – namely the virtual world *Second Life*) into face-to-face and online courses** present  
Development and assessment of student perceptions
- **Experiences of marginalized students in science** 2008 - present  
Narrative study
- **Vodcasting and Podcasting in both face-to-face and online courses** 2007 - present  
Development and assessment of student perceptions
- **Virtual Edge Online (dry) Labs to supplement the wet lab** 2004 – present  
Design, development, assessment of student knowledge, skills and perceptions  
Boggs, C.N. (2006) *The Virtual Edge, Development and evaluation of virtual labs for a General Microbiology Classroom* (doctoral dissertation, University of Wyoming, 2006)
- **Molecular Biology Lab Research** 1998-2001  
Isolated and purified the bacteriocin pediocin AcH, utilized Circular Dichroism Spectroscopy to characterize the secondary structural elements of pediocin AcH, sequenced mutant clones of the *papA* gene, created mutant variants of the *papA* gene encoding pediocin AcH using extension overlap PCR techniques
- **Chemistry Lab Research** 1996 - 1998  
Isolated and purified bovine carbonic anhydrase, Removed active site diamagnetic zinc II ion of carbonic anhydrase and replaced with a paramagnetic cobalt II ion to enable analysis via electron paramagnetic resonance (EPR)

## Professional Affiliations/Memberships

- **American Society for Microbiology (ASM)** 2001 - present  
Rocky Mountain Regional and National Member
- **Association for the Advancement of Computing in Education** 2003 - present  
Member
- **Western Interstate Commission for Higher Education (WICHE)  
Cooperative for Educational Technologies (WCET)** 2010 - present  
Member  
Cooperative Interest Group for student retention

## Volunteer Activities

- **Coach, Nordic Ski Team** 1998 – present  
University of Wyoming  
Between 10 and 90 hours per week  
Laramie, WY
- **Coach/Organizer/Lecturer, High School Summer Ski Camp** 2003 – present  
Medicine Bow Nordic Association, University of Wyoming  
Centennial, WY
- **Race Volunteer** 1998 – present  
Medicine Bow Nordic Association  
Laramie, WY
- **Trail Maintenance** 1998 – present  
Medicine Bow Nordic Association  
Laramie, WY
- **Group Trip Leader** 2003 - present  
University of Wyoming Outdoor Program (Campus Recreation)
- **Coach/Invited Lecturer** 2003 – 2005  
Casper High School Ski Camp  
Casper, WY
- **Coach, Nordic Master Skier Program** 2003  
Medicine Bow Nordic Association  
Laramie, WY
- **Race Volunteer** 2000  
Colorado Cup Biathlon Series  
Frisco, CO
- **Group/Activity Leader** 1996  
Winter Sports for Girls Program  
Boulder, CO
- **Extended Care Unit Volunteer** 1994  
Saint Vincent's General Hospital  
Leadville, CO

## Coaching/Athletic Achievements

- **Coach of the University of Wyoming Ski Team Invited to Represent the United States at the World University Games** 2010  
Erzurum, Turkey
- **Coach of six USCSA National Championship Teams** 2003 – present  
University of Wyoming Laramie, WY
- **Coach of seventeen individual USCSA National Champions** 2001 – present  
University of Wyoming Laramie, WY
- **Coach of sixty-four individual USCSA Academic All-Americans** 1998 – present  
University of Wyoming Laramie, WY
- **Commitment to Excellence Award, Cross-Country Skiing** 1998  
University of Denver Denver, CO
- **Varsity Letter Recipient, Cross-Country skiing** 1998  
University of Denver Denver, CO
- **Scholar Athlete Award** 1996  
University of Denver Denver, CO
- **National Relay Champion** 1994  
Rocky Mountain Division Nordic Ski Team Bend, OR
- **State Champion** 1994  
Colorado Nordic Skiing State Meet Vail, CO
- **Colorado High School All-State 4 times in Cross-Country Skiing** 1990 - 1994

## Coaching/Exercise Physiology Presentations

- **Athletics and Immune Function** October, 2010  
University of Wyoming Ski Team Lecture Series  
Available: [www.YouTube.com/uwski](http://www.YouTube.com/uwski)
- **Ethanol Detoxification** November, 2009  
University of Wyoming Ski Team Lecture Series  
Available: [www.YouTube.com/uwski](http://www.YouTube.com/uwski)
- **Nutrition** October, 2009  
University of Wyoming Ski Team Lecture Series  
Available: [www.YouTube.com/uwski](http://www.YouTube.com/uwski)
- **Nutrition, Skiing in College and Training Basics** 2005 – 2009  
Medicine Bow Nordic Association High School Summer Ski Camp
- **Ski Like a Girl, Coach Like a Girl: Are we Accomplishing our** April, 2009

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| <b>Objectives?</b>   | Laramie, WY   |
| University of Wyoming 2009 Shepard Symposium on Social Justice             |               |
| • <b>Ski Like a Girl, Coach Like a Girl: Gender and Equity in Coaching</b> | April, 2008   |
| University of Wyoming 2008 Shepard Symposium on Social Justice             | Laramie, WY   |
| • <b>Ski Like a Girl, Coach Like a Girl: Gender and Equity in Coaching</b> | April, 2007   |
| University of Wyoming 2007 Shepard Symposium on Social Justice             | Laramie, WY   |
| • <b>Coaching Female Athletes</b>  | October, 2004 |
| University of Wyoming Women in Sports Class Guest Lecturer                 |               |